

INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB 03/05761

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G11B20/10 G11B7/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G11B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6 134 211 A (MIYANABE SHOGO ET AL) 17 October 2000 (2000-10-17) cited in the application figures 5,6	1,6,9-11
Y	US 5 999 355 A (BEHRENS RICHARD T ET AL) 7 December 1999 (1999-12-07) column 8, line 34 - column 9, line 12 column 15; line 16 - column 16, line 35; figures 4a,4b,8a,8b,8c ----- -/--	1,6,9-11

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

Date of the actual completion of the international search

19 May 2004

Date of mailing of the international search report

28/05/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Brunet, L

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB 03/05761

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WU Z-N ET AL: "A MMSE INTERPOLATED TIMING RECOVERY SCHEME FOR THE MAGNETIC RECORDING CHANNEL" 1997 IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS. MONTREAL, JUNE 8, vol. VOL. 3, 8 June 1997 (1997-06-08), pages 1625-1629, XP000748917 ISBN: 0-7803-3926-6 the whole document	1,3-5
A	EP 1 178 484 A (VICTOR COMPANY OF JAPAN) 6 February 2002 (2002-02-06) column 14, line 18 - column 20, line 22; figures 1,4	1
A	SPURBECK M ET AL: "Interpolated timing recovery for hard disk drive read channels" COMMUNICATIONS, 1997. ICC '97 MONTREAL, TOWARDS THE KNOWLEDGE MILLENNIUM. 1997 IEEE INTERNATIONAL CONFERENCE ON MONTREAL, QUE., CANADA 8-12 JUNE 1997, NEW YORK, NY, USA, IEEE, US, 8 June 1997 (1997-06-08), pages 1618-1624, XP010227026 ISBN: 0-7803-3925-8 the whole document	1

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB 03/05761

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
US 6134211	A	17-10-2000	JP	11110712 A	23-04-1999
US 5999355	A	07-12-1999	EP	0805448 A2	05-11-1997
			JP	10092118 A	10-04-1998
			US	6208481 B1	27-03-2001
EP 1178484	A	06-02-2002	JP	2002042420 A	08-02-2002
			JP	2002050125 A	15-02-2002
			CN	1338743 A	06-03-2002
			EP	1178484 A2	06-02-2002
			US	2002018422 A1	14-02-2002